

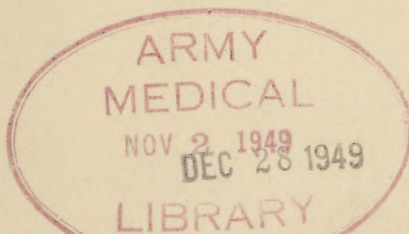
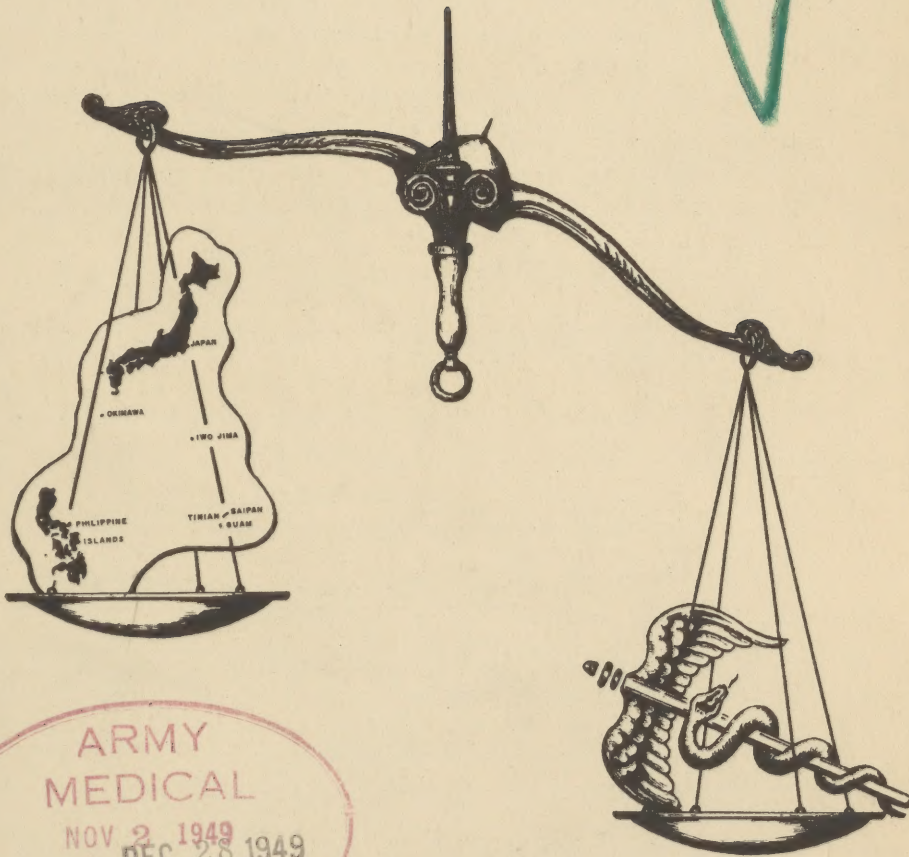
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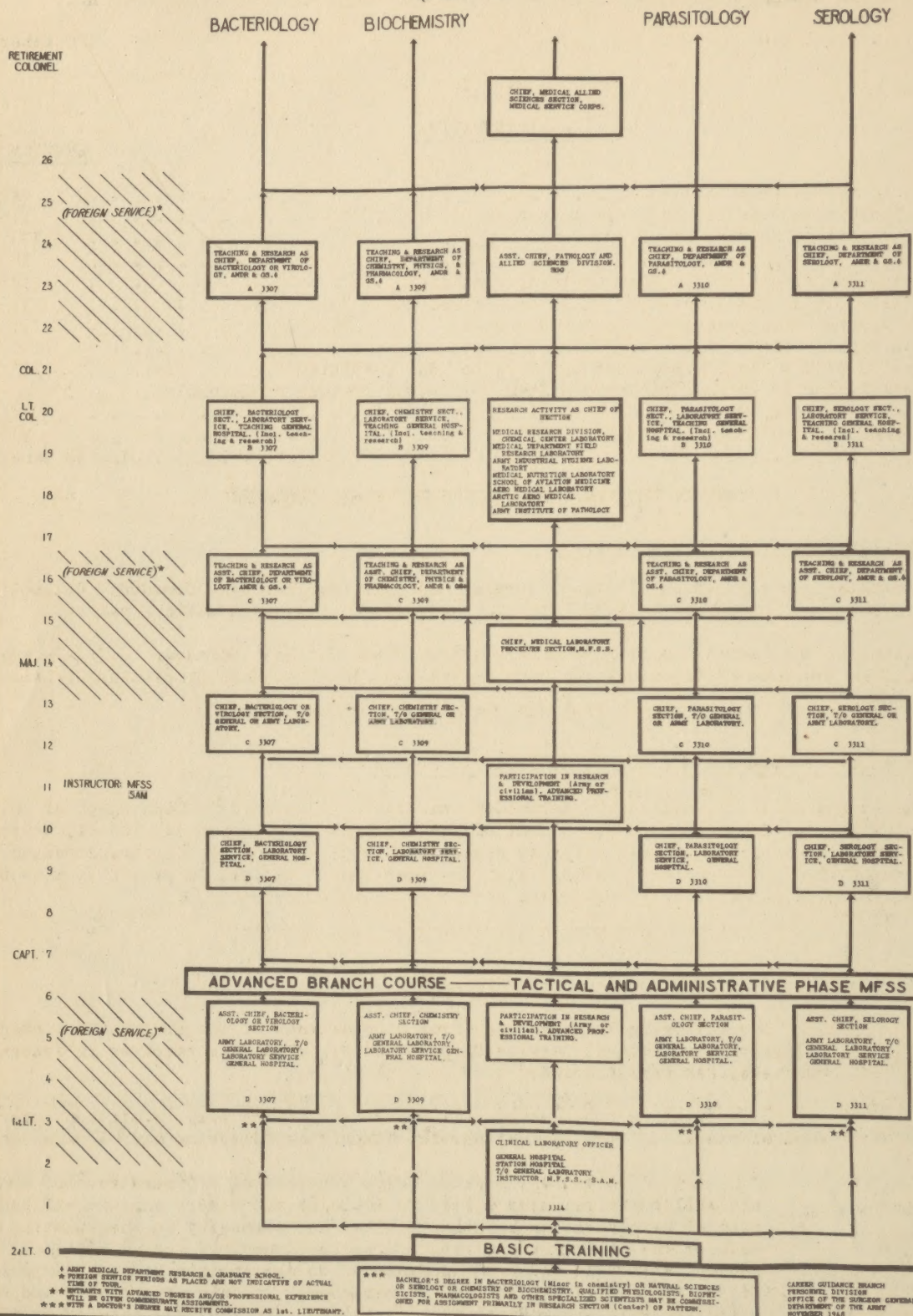


A FAR EAST PERIODICAL OF MEDICAL DEPARTMENT INFORMATION

SURGEON'S CIRCULAR LETTER

RESTRICTED

PROFESSIONAL PROGRESSION PATTERN MEDICAL ALLIED SCIENCES SECTION, MSC (PART A)



GENERAL HEADQUARTERS
FAR EAST COMMAND
MEDICAL SECTION

SURGEON'S CIRCULAR LETTER

APO

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NUMBER.10

1 October 1949

PART I

ADMINISTRATIVE

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I. Organization of the Medical Section

Departure from the Medical Section, General Headquarters, Far East Command: Colonel Melville A. Sanderson, DC, Dental Surgeon, was evacuated to the United States as a medical patient.

Arrival in the Medical Section, General Headquarters, Far East Command: Major Harvey E. Archer, MSC, from the zone of interior, has been assigned to the Plans and Operations Division.

II. Psychiatric Evaluation Prior to Referral to Boards

The attention of all medical installation commanders is invited to Department of the Army Special Regulations No. 600-600-5 and Department of The Air Force Regulation No. 160-24, covering psychiatric evaluations of individuals prior to appearance before boards of officers convened under the provisions of AR 615-368 and AR 615-369. With the shortage of Medical Corps officers in the Far East Command, the provisions of this regulation should be fully observed.

III. Utilization of Medical Service Corps Officers

The following is an extract from a Department of the Army letter, subject: Utilization of Medical Service Corps Officers, which was received in General Headquarters, Far East Command:

"Pending publication of a Department of the Army regulation covering the general mission of the Medical Service Corps, the following may be referred to:

'The Medical Service Corps consists of officers some of whom are skilled in sciences allied to medicine and others who are skilled in special management techniques peculiar and necessary to the function of each of the medical and allied professions required for an efficient medical service. Under the command of an appropriate Medical Corps officer, those officers skilled in management techniques organize and operate an efficient medical economy so that professional categories of



Medical Department personnel, relieved to the maximum extent practicable of nonprofessional military and administrative responsibilities, may perform duties of maximum value to the service and to themselves.'

"The availability of Medical Department professional personnel makes mandatory maximum efficiency in their utilization. Administrative and other nonprofessional duties that can or should be assumed by Medical Service Corps officers must not be delegated to professional personnel. Medical Department professional personnel should be freed to the maximum extent possible for the performance of duties requiring professional medical training and experience.

"It is impracticable to classify to the utmost detail each function of each component of the Medical Department, and to indicate what duties should be accomplished by each. In general, professional duties will be performed by personnel who have had professional training and experience, and administrative duties requiring not professional but administrative training and experience, by appropriate Medical Service Corps officers. Normally, except for the inescapable necessity of Medical Corps officers exercising command of medical installations where patients are treated, and overall direction of Medical Department activities, the above general demarcation should be rigidly adhered to. Cited are a few examples which indicate the general delineation of functions between Medical Corps and Medical Service Corps officers at Army hospitals.

a. Assignments. Medical Corps: Commanding Officer, Deputy Commanding Officer, Assistant Commanding Officer, Ward Officer, Training Officer (limited to professional assignments, such as at general teaching hospitals), Instructor. Medical Service Corps: Executive Officer, Commanding Officer Medical Detachment Enlisted Men, Commanding Officer Detachment of Patients, Supply Officer, Personnel Officer, Ward Administrative Officer, Medical Registrar, Hospital Inspector, Training Officer, Instructor.

b. Duties:

(1) Duties of chiefs of professional services, ward officers and other Medical Corps officers primarily dealing with the treatment of patients involve the handling of certain necessary professional administration, such as clinical histories and allied correspondence. Functions of ward administrative officers and other Medical Service Corps officers assigned to the various hospital professional services include all duties of a purely administrative nature which can be delegated by Medical Corps officers.

(2) Functions of hospital inspectors are normally confined to inspection of conditions of discipline, training and morale; physical facilities and equipment; administrative activities; and special inspections of audits of funds and property.

(3) Medical Service Corps officers normally assume all property accountability and formal property responsibility. Medical Corps officers' functions with respect to supply are confined to general supervision and direction. Normally they assume formal property responsibility only when Medical Service Corps officers are unavailable.

(4) Medical Service Corps officers are normally responsible for formulating, coordinating and operating training programs and schedules except that all phases of professional training for Medical Corps officers, such as those at general teaching hospitals, are assumed by Medical Corps officers.

(5) Formal instruction by Medical Corps officers is limited to professional and professional technical subjects. Formal instruction by Medical Service Corps officers consists of administrative and military subjects, including all others not requiring professional knowledge.

(6) Medical Corps officers will not serve as members of boards which do not require professional medical opinion except where exigencies require their appointment to court martial boards. They will not perform duties of a precautionary nature, such as attendance at firing ranges and athletic events, when qualified Medical Service Corps officers or enlisted technicians are available. Medical Service Corps officers will be substituted for professional personnel in performance of all additional duties that do not require the knowledge or immediate presence of Medical Corps Officers."

The letter further states as follows: "Commanding officers of medical installations will take immediate steps to survey and insure proper delineation of functions between professional categories of Medical Department personnel and appropriate Medical Service Corps officers."

IV. Hospital Administration Course

Twenty-eight Medical Service Corps and Hospital Corps officers, including four Army and three Air Force officers, have been selected to attend the 10-month course in Hospital Administration which convened 6 September 1949 at the Bethesda, Maryland, Naval Medical Center.

V. Senate Approves Employment of Civilian Doctors, Dentists



The Armed Forces have decided upon a new approach in their effort to alleviate the continuing shortage of physicians, dentists and nurses.

Taking official note of the failure of Defense Secretary Louis Johnson's appeal for volunteers, the Senate Appropriations Committee has approved a Department of Defense request for permission to use approximately \$8,000,000 to hire 686 physicians, 274 dentists and 400 nurses for one year on a contract basis.

The services have estimated a net shortage of 1,958 physicians, 988 dentists and 1,557 nurses during Fiscal 1950, but spokesmen told the Senate Committee they expect to be able to hire far less than the number needed.

As of 5 July, only 528 of the approximately 7,000 Government-trained doctors and dentists to whom Secretary Johnson directed his appeal had volunteered for active duty. Nevertheless, the Secretary decided against requesting a medical draft, and sought, instead, authority to hire civilians on a contract basis.

Of the 528 who have applied for active duty, 184 doctors and 32 dentists joined the Army Medical Corps. Forty-two physicians and 28 dentists joined the Air Force and 194 doctors and 48 dentists joined the Navy.

In support of the Department of Defense request to hire civilians, Rear Adm. Herbert L. Pugh testified that "the employment of such personnel would be limited so that the total civilian and medical personnel would not exceed the legal authorizations for military medical personnel in proportion to the military strengths for which funds are appropriated.

"This employment of civilian professional personnel," the Admiral continued, "would be financed by transfers, in the discretion of the Secretary of Defense, from military-pay appropriations to those appropriations within the respective services available for the employment of civilian medical personnel. The necessity for this proposal is the present shortage of military medical personnel because of the disparity of available earnings with those anticipated in private practice."

VI. Reserve Medical, Dental and Veterinary Officers Offered Short Term Tours

Reserve officers of the Medical, Dental and Veterinary Corps have been authorized active duty periods of from 1 to 29 days by the Army. While no single tour for more than 29 days is permitted under the program, a total of 90 days of active duty is authorized for the fiscal year. This action is another effort to ease the shortage of medical personnel.

The medical short-term plan was approved after a nation-wide survey of medical reservists was made by Maj. Gen. R. W. Bliss, Army Surgeon General, through questionnaires mailed last year. Replies to these questionnaires indicated that about 2,000 reserve MC, DC and VC officers would be available for short duty tours at Army installations near their homes. No officer will be ordered to active duty where travel to duty station is involved. Leave, or compensation in lieu of leave, is not authorized.

Officers ordered to active duty will be paid from "pay of the Army," as distinguished from Reserve training funds. They will remain assigned to their Reserve organizations and will not be accounted for in the strength of the Army.

To be eligible to participate in this program, physicians, dentists and veterinarians must hold a commission in the appropriate section of the ORC, dated after 28 June 1945 and must be members of the Active Reserve. However, men without Reserve commissions who desire to participate in the program may apply for appointment under current regulations.

Application for active duty will be submitted in duplicate on DA AGO Form R-5606. The application will be forwarded to the senior Army instructor, ORC, of the state of residence. Orders to duty will be issued when it is determined that the applicant's services can be utilized to fill an authorized vacancy of appropriate grade. In no case will officers be placed on active duty in excess of the number of authorized position vacancies for each grade, SR 140-210-10 states.

VII. New Training Program for Psychiatric Social Workers



A new training program for psychiatric social workers has been announced by the Army Medical Department. Male graduate students of social case-work who want a career with the Regular Army Medical Service Corps and who are enrolled in graduate schools of social work approved by the Army are invited to apply.

Commissions as second lieutenants in the Medical Service Corps Reserve will be tendered to selected students during fiscal years 1950 and 1951. Under this program, students commissioned will be permitted to continue in their schools as officers on active duty, with full pay and allowances until completion of academic requirements for the Master of Social Work degree (or its equivalent) with a social case-work major. On receipt of the degree, student officers will serve for a minimum of two years in the Army.

Candidates must be male citizens, able to meet the physical standards prescribed for the Regular Army, not under 21, nor over 29½ years of age on the date of application. Each candidate must have successfully completed a full academic graduate year of training in social case-work in a school of social work approved by the Army.

Applications may be obtained by writing to The Surgeon General, Department of the Army, Main Navy Building, Washington 25, D.C., Attn: Chief, Personnel Division. Completed applications must be submitted before 1 June 1950 for fiscal year 1951.

(ED's NOTE: See SR 605-60-40, 16 May 49 - Officers Medical Service Corps Allied Scientist Procurement Senior Psychology Student Program.)

VIII. WACs Train as Nurses' Aides

A 48-week course in practical nursing for WAC enlisted women currently assigned to the Army Medical Department was announced recently by Maj. Gen. R. W. Bliss, the Surgeon General. The course will be conducted at Walter Reed General Hospital from 17 October 1949 to 29 September 1950.

The purpose of the course is to train selected enlisted women in practical nursing duties, skills and knowledges. Upon completion of the course, the WAC enlisted women will be eligible for state practical nurse licenses in accordance with the standards of the National Association for Practical Nurse Education, and will be qualified for assignment to duty as medical technicians.

In announcing the new course of instruction, General Bliss said its primary purpose is to train additional personnel in the fundamentals of bedside care to supplement the professional nursing service of the Army Nurse Corps throughout the military establishment. Carefully selected WAC enlisted women will be enrolled. They will not replace the hospital corpsman, whose service on hospital wards is an integral part of military medicine, but will be added to the medical team as a further means of providing improved care for the military patient.

Captain Isabelle Mason, ANC, heads the instructional staff of five Army nurses and one dietitian. Housing, training, and recreational facilities are being provided at the Forest Glen, Md., branch of Walter Reed General Hospital.

IX. Mass Transfer of 3700 Medical Department Officers to USAF Completed

The Office of the Air Surgeon announced that approximately 3,700 Medical Department officers were transferred from the Department of the Army to the Air Force. Transfers were made after a board screened voluntary applications made by interested officers. Although a total of 3,829 transfers were authorized by a joint Army-Air Force agreement in a "proportional division of available officers to meet the needs of the two medical services," only 3,706 were transferred in the first joint action.

Transfers completed by Corps assignments transferred and authorized are:

MEDICAL CORPS:

	<u>TRANS.</u>	<u>AUTH.</u>
REGULARS	407*	441
RESERVES	<u>775**</u>	<u>695</u>
	1182	1136

(* Of this total, 7 are officers from FEC)

(** 203 officers of this total will be eligible for separation 1 September 1951. Of the 775 total, 15 are officers from FEC)

DENTAL CORPS:

	<u>TRANS.</u>	<u>AUTH.</u>
REGULARS	174*	163
RESERVES	<u>250**</u>	<u>256</u>
	924	419

(* Of this total, 9 are officers from FEC. Six 1st Lts and five captains originally accepted as Reserve Officers, subsequently received Regular Army Commissions)

(** Of this total, 9 are officers from FEC)

MEDICAL SERVICE CORPS:

	<u>TRANS.</u>	<u>AUTH.</u>
REGULARS	157*	157
RESERVES	<u>576**</u>	<u>599</u>
	733	756

(* Of this total, 9 are officers from FEC)

(** Of this total, 16 are officers from FEC)

VETERINARY CORPS:

	<u>TRANS.</u>	<u>AUTH.</u>
REGULARS	42	42
RESERVES	<u>36*</u>	<u>39</u>
	78**	81

(* Of this total, 1 is an officer from FEC)

(** This deficit agreed to by Board Members of the two Medical Departments)

ARMY NURSE CORPS:

	<u>TRANS.</u>	<u>AUTH.</u>
REGULARS	307*	307
RESERVES	<u>892**</u>	<u>892</u>
	1199	1199

(* Of this total, 10 are officers from FEC)

(** Of this total, 53 are officers from FEC)

DIETITIANS:

	<u>TRANS.</u>	<u>AUTH.</u>
REGULARS	12*	12
RESERVES	<u>26**</u>	<u>26</u>
	38	38

(* Of this total, 2 are officers from FEC)

(** Of this total, 3 are officers from FEC)

OCCUPATIONAL THERAPISTS:

	<u>TRANS.</u>	<u>AUTH.</u>
REGULARS	6	6
RESERVES	<u>7</u>	<u>7</u>
	13	13

PHYSICAL THERAPISTS:REGULARS
RESERVESTRANS.13
26*
39AUTH.13
26
39

(* Of this total, 3 are officers from FEC)

X. Modified Installation of Medical Department Item 6-124-300, Processing Assembly, Radiographic Darkroom, Field, (Reference TM 8-629) - Maj. Volney H. Rattan, MSC, 49th Gen. Hosp. APO 1052

Two Radiographic Darkroom Processing Assemblies, recently placed into service at the 49th General Hospital and the 361st Station Hospital, Tokyo, Japan, have been installed with the tank (figure 1 (1), TM 8-629) and the base section (figure 1 (9)) side by side rather than the usual manner of the tank setting directly over the base section as illustrated in TM 8-629, figure 1. This modification permits instant accessibility for maintenance and servicing.

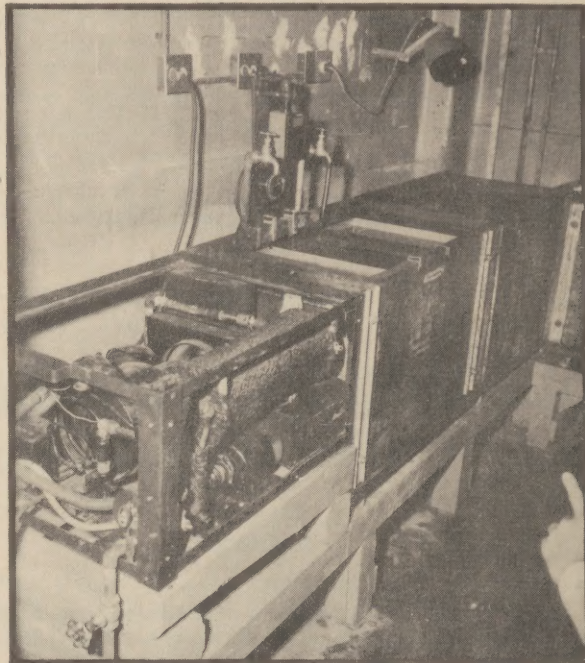
The modified installation pictured in the photographs required two plumbing changes which were accomplished in each case by the hospital utility sections using scrap lumber for the platform and approximately eight feet of copper tubing. The installation required the following:

(a) A suitable platform for support of base section and tank at convenient working height for x-ray technician.

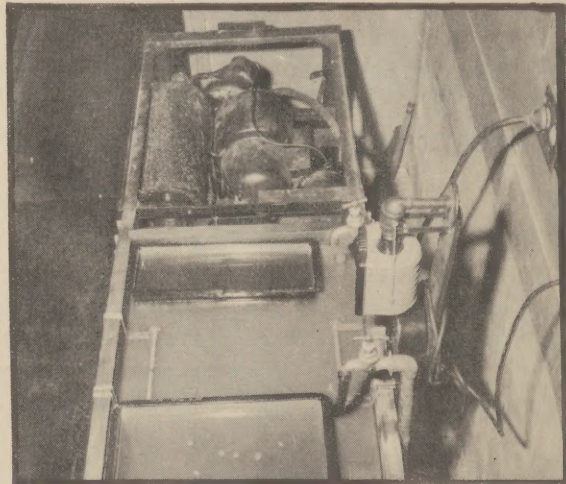
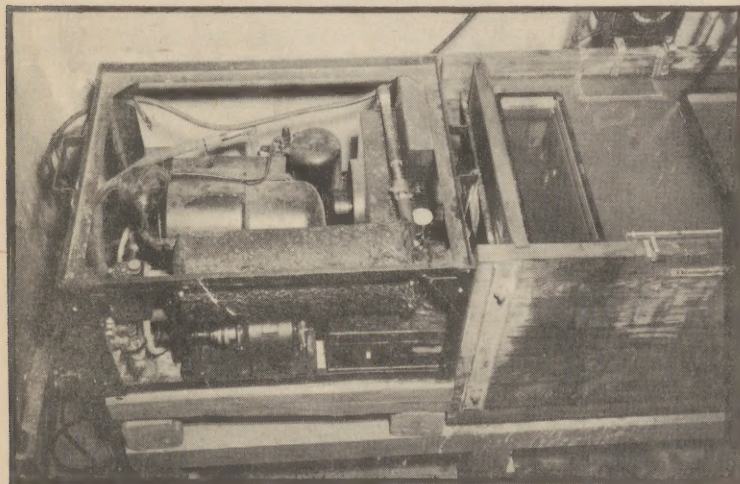
(b) A cover for the base section which can be fitted so as to set into the angle-iron ledge of the base.

(c) The clamps retaining the community drain pipe (figure 9 (4), TM 8-629) and the recirculating tube (figure 9 (5)) were removed and the community drain tube was coupled directly to the drain fitting of the tank (figure 4 (1)).

(d) Utility plumbers extended the circulating tube (figure 9 (1)) and the recirculating tube (figure 9 (5)) with copper tubing and insulated the added length



Med. Dept. JAN Item 6-124-300 Processing Assembly, Radiographic Dark-Room, Field, 110 volt, 60 cy AC



with rubber laboratory tubing. The couplings and fitting attached to the water circulating tubes were removed and used on the ends of the extended tubes.

(e) Remainder of installation and operating instructions are as prescribed in TM 8-629.

The Processing Assemblies as modified above have been in use during the hot months of July and August and operation in both cases has been satisfactory. The mechanical parts, motor and pump are easily accessible for cleaning and servicing without the inconvenience of draining and disassembly of the tank. The modification has shown no signs of impairing the efficiency of operation of the processing assembly.

XI. Recent Department of the Army and FEC Publications



AR 35-1350, 18 Jul 49, C-1. Pay of Retired Commissioned and Warrant Officers of the Regular Army and Regular Air Force. See Par 65 - Retirement of Mentally Incompetent Officers

AR 615-365, 19 Jul 49 - Enlisted Personnel: Discharge - Convenience of the Government. Supersedes AR 615-365, 27 Oct 48 and C-3

AR 615-5, 21 Jul 49 - Enlisted Personnel: Reductions and Promotions. Par 22. Reduction because of Sickness. XR: SR 615-5-2, 21 Jul 49

AR 35-1320, 11 Aug 49, C-1 - Finance and Fiscal. General Provisions Relating to Pay of Military Personnel. Par 11 (added): Retention in Service for Medical Care or Hospitalization

DA CIR 93, 4 Aug 49 - Penicillin Crystalline, in Oil and Wax, 10 cc (Medical Stock No. 1-606-795)

DA CIR 95, 19 Aug 49 - Sec I. Army-Navy Catalog of Medical Materiel, Spare Parts Section. Sec. II. Rescission in ASF Supply Catalog MED-7-44, 10 Feb 45

DA BUL 24, 23 Aug 49 - (Joint Army and Air Force) Sec III. Medical Service Corps Promotion List. An act of Congress (P.L. 173-81st Cong) provides certain adjustments on the promotion list of Medical Service Corps of the Regular Army

SR 615-5-2, 21 Jul 49 - Enlisted Personnel. XR: AR 615-5, 21 Jul 49

SR 55-120-50, 25 Jul 49 - Extent of Dependent Travel Authorized when Military Personnel of Departments of the Army and the Air Force are Hospitalized

SR 420-45-7, 1 Aug 49 - Repairs and Utilities: Report of Insect and Rodent Control Activities. Supersedes Par 3. 60 d, TM 5-600, 6 Nov 45 and Sec IX, DA Cir 217, 48

SR 420-310-1, 1 Aug 49 - Repairs and Utilities: Insect and Rodent Control. Supersedes Sec VIII, Chapter 3, TM 5-600, 6 Nov 45 and C-7, 20 Jul 48, DA Cir 267, 48

SR 605-290-1, 12 Aug 49 - Officers: Separation Certificates. Par 2 b (3) (e) (f) (g): Discharge - Physical Disability due to Misconduct, etc

T/O&E 8-510, 21 Jul 49 - Field Hospital

GHQ SCAP CIR 17, 30 Jul 49 - Foreign Quarantine Regulations for Japan. Changes par 10, GHQ SCAP Cir 9, 29 Mar 48

GHQ SCAP CIR 20, 6 Sep 49 - Consumption of Japanese Food Products. SCAP Cir 11, 26 Apr 48 rescinded

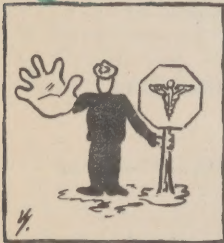
GHQ FEC CIR 40, 6 Aug 49 - Repairs and Utilities. Rescinds Sec IV, GHQ FEC Cir 46, 23 Apr 47

PART II

TECHNICAL

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XII. Physical Requirements for Officer Candidates



The following extract from a Department of the Army letter (AGAO-R 352 OCS (25 Aug 49)CSGPA, subject: Physical Requirements for Officer Candidates, dated 30 August 1949), relative to physical examination of applicants for Officer Candidate School, received in General Headquarters, Far East Command, is published for the information of all examining medical officers and any other personnel concerned:

"a. Approximately every 5th man selected as a fully qualified applicant for Army Officer Candidate training and transferred to the Army Officer Candidate School, Fort Riley, Kansas, is found to be physically unqualified for such training on his arrival at the School, is relieved from the School, and is reassigned. The resultant waste of time and money for both the government and the rejected applicant, the loss in the productivity of our training facilities, the serious effect on enlisted morale and the continued laxity of the initial examining doctors in this matter, can no longer be tolerated.

"b. The physical qualifications required for selection and transfer to the Army Officer Candidate School are clearly set forth in AR 40-100 (paragraph 16) and are easily determinable by any qualified examining doctor. In view of this, the duplicate physical examination and screening of newly arrived applicants at the Officer Candidate School has been discontinued.

"c. It is necessary that the initial physical examination given to applicants as part of their routine processing in the field prior to their transfer to the Officer Candidate School, be completed according to the regulations, be thorough, and reliable. Continued laxity in this matter will be cause for appropriate corrective action.

"d. The Commanding General, Ground General School will submit a detailed report to the major commander concerned, on every officer candidate whose lack of progress in academics, leadership or in physical training is traceable to a disqualifying physical deficiency which was overlooked by the initial examining doctor or which was injudiciously waived. Upon receipt of this report, the major commander concerned will take any action he deems necessary to rectify the situation."

XIII. Some Suggestions for Successful Audiometry - Captain Max J. Fischer, MC, 49th General Hospital, APO 1052



One of the most perplexing problems for those of us in the Far East Command doing physical examinations is that of the required audiometric examination. Many officers with apparently normal ears and normal whisper voice tests have audiograms which are below normal. The object of this article is to point out some of the conditions which bring about this incongruity, and wherever possible offer a solution.

Number one on the list is the fact that the standard audiometer is designed and calibrated to be used in a soundproof, or at least sound-deadened, room. This type of room not being available, it is necessary for those of us doing audiograms to select a room in the hospital which is as quiet as possible. Naturally, a room not opening on to a main corridor and if possible on the quiet side of the hospital would most nearly meet this condition. Another method of combating outside interference is the use of the binaural headset in place of the monaural earphone. This last suggestion has been adopted as standard procedure even in those clinics equipped with sound-treated rooms.

The second problem is actual misuse of the audiometer during the tests. One of the most common mistakes is using what is termed the sliding technique in changing frequencies, as well as increasing or decreasing the intensity of the tone being transmitted. The technicians doing the tests should be cautioned never to move a dial on the audiometer without first cutting off the sound by use of the tone interrupter. This helps in two ways -- first, by preventing fatigue of the eighth cranial nerve and second, by preventing damage to the audiometer which, as we well know, is a delicately calibrated machine. It is well to note at this time that wherever possible the calibration of these machines should be checked every four to six months.

On several occasions audiometric readings have been seen which could not possibly be true. The only interpretation that can be made is that the technician performing the tests was confused by the readings on the intensity dial. It must be remembered that the white figures pertain to air conduction and the small red figures are for bone conduction. Wherever possible the use of the standard form as put out by the companies manufacturing audiometers should be used. This will aid very much in recording and simplifying the results of the audiometric tests.

In conclusion it is well to remember that even in the average sound-deadened rooms the noise level of about 15 decibels exists, so that in the interpretation of audiograms it must be borne in mind that outside interference will undoubtedly play a part in the final result in audiometric readings.

XIV Disability - Presented at the 49th General Hospital, Tokyo, Japan, by Dr. Earl D. McBride, Civilian Orthopedic Consultant



The subject of disability is one that is not taught in medical school. It seems that the doctor has to learn about court methods the hard way. We are taught in medical school that a bad result in fractures may be due to shortening or angulation or ankylosis, but we are not taught what the actual effect of such a bad result will be in relation to the loss of working capacity or loss of function in general to the individual.

In these modern times a great deal of the average doctor's practice consists of cases in which the results must show up in signed forms. It may be for the insurance company, Veterans Administration, crippled children's societies, or a vocational department of the government. It is quite necessary to be able to determine the extent of temporary healing period and the extent of permanent disability, especially in orthopedic practice. Furthermore, it is necessary to understand something of the legal aspects of testifying in court. In many instances there are wide variations in the evaluation of percentages of disability in compensation cases as expressed by the various examining doctors. The doctor examining the claimant may be accused of having too high a percentage and the doctor examining for the company may seem to have a very low percentage.

We are taught in medical school to develop a diagnosis through scientific reasoning. If those who evaluate disability and percentage could develop a scientific method of reasoning such disability claims, they would have fewer accusations of partiality. First of all, disability must have a basis of comparison with the normal. In compensation cases this comparison is with that of amputation. The law specifies a certain sum for amputations of certain limbs at certain levels. When the limb is disabled but not amputated the disability is expressed in a percentage of the whole. A further basis is often that of a specified occupation or that of ordinary manual labor. There is a great deal of difference whether the disability is applied to a specific vocation or to vocations in general. An individual might have a total permanent disability in respect to a vocation requiring expert function of the fingers, for example, whereas there would be a very moderate loss if the same disability were applied to any one of several hundred occupations.

A still different basis may occur in examinations for the Veterans Administration or for Army pension. This goal or basis on which to apply the disability must be determined preliminary to making the examination or final estimate.

In examining a case, much more must be done than simply obtaining the anatomical defects such as deformity or ankylosis. There are three factors which must be considered in evaluating disability. (1) The physiological effects of the abnormal changes. (2) The amount of rehabilitation that can be expected. (3) The extent of function as applied to occupational opportunities. The physiological effects of a deformity involve the subject of physics and geometry in respect to the extremities. For example, if the lower third of the humerus is fractured and a posterior angulation of severe degree occurs, then theoretically, from the standpoint of geometry, the elbow is in hyperextension when it is straightened and it can never reach the full extent of flexion. From the standpoint of physics, the effect of leverage has been pointed out. The pull on the biceps tendon, for

instance, has been transplanted backward. Likewise, the pull of the triceps is altered. In another instance, an inversion deformity of the ankle may occur as a result of a Pott's fracture, causing abnormal weight bearing on the inner side of the foot.

It is not enough to simply admit that this occurs. The examiner should have some idea of what the actual result of such a deformity will mean to the individual. We have estimated that if the foot is displaced laterally a distance of one inch, it will double the body weight on a line perpendicular to the inner malleolus. We can begin to see then what an angulation of this kind really means. Another problem has been estimated in that a man who must walk with his knee flexed to 60 degrees will double his body weight as it falls on the quadriceps muscle. If the examining doctor has some such understanding of what these problems in physics may mean to the crippled individual, than he can begin to evaluate the loss of function and the extent of disability to a much more intelligent degree.

In the rehabilitation of any case in which there is a claim, many factors of social importance are involved. The extent of education, the willingness of the individual, and the social opportunities are all important factors. The examining doctor should have a good conception of this phase of the individual's disability problem. Surgical reconstruction and improvement of the deformity is about all we usually think of. Psychotherapy may be an important factor in this phase of evaluating disability.

The only common basis which I have been able to find as a common denominator for evaluating disability is that of determining the extent of function in the disabled part. After the physiological and anatomical changes have been thoroughly considered and the possibilities of rehabilitation been given full consideration, then we are in a position to determine what the individual can do or cannot do in light of his crippling condition. What is function? What happens when a man uses his arm or leg for the purpose of carrying out certain occupational duties? If we study the word function, we find that it can be divided into several factors. If these factors are in turn given a relative percentage, then we may devise a measuring rod for determining the percentage of function. I have divided these factors as follows:

Quickness of action.....	10%
Security.....	10%
Coordination.....	20%
Strength.....	20%
Endurance.....	20%
Bad Risk.....	10%
Preemployment.....	10%

Quickness of action is self-explanatory. Security is one's confidence in the injured limb. Coordination: When one does something suddenly and does not have to think about it. Strength: Strength is bound to be less if he does not have normal function. Endurance: May be able to work for a short time, but his strength will not last. Risk: If he is not safe to himself or to other men, risk must be questioned. Preemployment: What kind of work can he do after disability?

Take for an example an elbow which is limited from full extension to right angles. The main question is function: What can he do with his arm? We would rate him as follows:

Quickness of action.....	2%
Security.....	2%
Coordination.....	6%
Strength.....	5%
Endurance.....	10%
Risk.....	1.5%
Preemployment.....	2%

TOTAL DISABILITY..... 28.5%

The consideration of circumstances will apply to whatever the field may be.

XV. Psychological Factors in Atomic Warfare - Colonel James P. Cooney, MC. (An Abstract)



Colonel James P. Cooney, MC, in his article "Psychological Factors in Atomic Warfare," published in the August 1949 issue of the American Journal of Public Health and The Nation's Health, set forth his ideas on this most important problem.

Since the advent of nuclear explosives in the so-called atom bomb, with its attendant ionizing radiations in massive amounts, unfortunate psychological reactions have developed in the minds of both the military and civilians. This reaction is one of intense fear and is directed against forces that cannot be seen, felt, or otherwise sensed. Colonel Cooney, in his article, states "I have observed the reactions of the military, who were not acquainted with the technical details, on two missions, Bikini and Eniwetok, and the fear reaction of the uninitiated is appalling. The fear reaction of the uninitiated civilian is ever evident and is of such magnitude that it could well interfere with an important military mission in time of war."

The author's ideas on the psychological factors in atomic warfare are set forth in this article with the hope of stimulating thought and more careful consideration of this vital matter. His remarks are not to be interpreted as indicating anything less than the fullest respect for the phenomenon of radioactivity as a diabolical instrument of death and injury to man; however, he points out "we are justified in taking a rather hardboiled attitude toward this subject. Since we have no choice but to live with it, we must keep it in proper perspective."

He states "whenever living cells are affected by ionizing radiation, it is detrimental. It must be realized that nature has been always bombarding the populations of the world with ionizing radiation since the formation of the universe - by constant exposure to cosmic radiations and to radiations emanating from natural radioactive elements - such as radon and thoron.

"This kind of injury must be considered, not as standing by itself, but in connection with the total situation, i.e., weighed in relation to the objectives in view, both in regard to their importance under the circumstances and their probability of attainment. Unless we can thus integrate it with our whole philosophy of national defense, the atom bomb can prove a liability rather than an asset.

"With the publicity emanating from the atom bomb, the term 'Roentgen' has become a household word. A Roentgen is a term of physical measurement such as the 'centimeter' or the 'gram.' It is based upon one of the physical effects of certain types of electromagnetic waves that cannot be measured with a yardstick. The large step from such a physical measurement to expected biological behavior in human beings is based upon experimentation on lower animals, empirical observations, and clinical investigations. There are, however, many blank spaces in our experience and many superstitions have been introduced. Since it is impossible to stipulate all conditions of experimentation and observation in most of the articles written about radiation for lay consumption, an idea has evolved in many minds that any and all radiation exposure will cause immediate and mysterious injury or death. This reasoning is fallacious, but it is also plausible and has become contagious.

"The problem of radiation injury is not one which can be easily simplified. In fact, oversimplification of this danger may be the cause of a situation such as we are combating at this time. It seems desirable to explore radiation hazards more fully in relation to other hazards which are considered more common and acceptable.

"The permissible radiation dose is 0.2 or 0.1 r per day, or 0.3 r per week according to your authority. It should no longer be called the 'tolerance dose,' for no amount of radiation should be tolerated without good reason. One is willing however to name a dose so small that a person might be exposed to it every day of his life and suffer no observable injury or shortening of his life span.

"When one is dealing with radiation technicians or with industrial workers who are exposed to this hazard daily in their life's work, he can easily see how the maintenance of exposures at or below this level is a very desirable thing. Day-by-day contact with radiation or radioactive materials demands that a low limit of exposure be adhered to, if one is to avoid late complications of such chronic trauma. Similar occupational hazards exist in all branches of production - noxious gases and dust to the coal miner, the steel worker, and the chemical worker. It has been known for years that, if a miner is subjected to small amounts of dust containing silica, he eventually will develop silicosis, frequently complicated by tuberculosis, and perhaps leading to a fatal termination. For this reason, methods of counting and analyzing dust have been perfected, and forced ventilation systems

have been established to minimize the danger. This does not mean that if an individual makes a one day visit to a mine and inhales 100 times the daily minimal allowance for miners that he will develop silicosis. This tolerance limit has nothing in its definition which refers to acute exposure. Neither is the 0.1 r per day tolerance limit related to acute exposure in radiation.

"The total body dose of radiation received as an acute exposure is known from therapeutic experience to vary with the patient. This, and the lethal dose for man, have not received the same attention from rule-making bodies that the 'permissible dose' has had. We may take 450 r as the median lethal dose.

"Going further down the scale, one may consider a limit of 200 r, which may cause radiation sickness in 50 per cent of human subjects when delivered, as an acute dose of total body radiation. Some subjects may be quite sensitive to radiation and others quite resistant, so it is difficult to calculate the precise effects to be expected.

"It is not unusual to subject a patient to multiple x-rays of the skull, spine, long bones, gastrointestinal tract, kidneys, sinuses, etc., in a relatively short space of time, thus subjecting him to a dose of radiation which may well approach 25 r. These procedures are not used without purpose and the benefit from the information gained outweighs all fear as to the possible injury from radiation. Full body radiation in doses of the order of 25 r to 100 r have been given to patients for treatment of various conditions. Again, these exposures are prescribed for a purpose which outweighs the fear of radiation injury.

"It is not the purpose of this article to underestimate or understate the radiation hazard. But from a military standpoint the physical danger must be evaluated against the objective to be gained.

"War is fought with the knowledge that men will be killed. Campaigns are planned with expectation of losing so many thousand men. If you call these 'acceptable hazards' then it is obviously not wise to treat radiation hazards very differently. If acceptance of radiation hazard will lessen the other military hazards, then that is what one should accept. This can only be done, however, if the attitude of the men exposed is psychologically similar toward the two types of hazard. If they are going to be as much terrified by the knowledge that a recent atom bomb explosion has contaminated the ground they are walking over as they would be by seeing one in ten of their bodies fall by machine gun fire, one cannot apply the 'ideal' solution. What is dominant for actual percentage survival is the resultant of all the actual hazards. But for battle discipline and military effectiveness the dominant measure is not the hazard itself but the soldiers' estimation of the hazard.

"Men at war suffer many hazards, acute and chronic, besides bullets. Malaria, venereal disease, exposure to cold and wet, starvation, etc. Some of these, e.g., VD, are under-evaluated by the doughboy. Others, e.g., filariasis, are grossly over-evaluated. At present radiation is perhaps over-evaluated worst of all, partly due to our great care in Operations Crossroads. That operation was conducted at the peacetime level of safety to personnel. Unless we had openly proclaimed immediate danger of war, the military level for hazardous training programs, such as we had actually adopted during the war, using live grenades and live ammunition in the machine guns, was not tolerable at Bikini. It must be emphasized that acceptable hazards in a peacetime operation, cannot be adhered to in wartime.

"Psychological training for the military level of acceptable radiation hazard is possible and should be prosecuted, even though operational field training does not permit this to be accomplished at the present time.

"We hear much about sterility as a result of exposure to ionizing radiation. It must be borne in mind that sterility results only from a large dose of acute radiation, or from smaller doses over a long period of time - a matter of years. Sterility also results from other accepted hazards encountered in war - venereal disease is one of the foremost causes of sterility. We are aware of hundreds of paraplegics resulting from spinal fractures, gun shot wounds of the cord, etc., during the last war who are not only sterile but impotent. Leukemia may be another late result in casualties from repeated radiation, but amebic dysentery and schistosomiasis carry a great delayed hazard, and so does the effect of beriberi, which was so prevalent among our prisoners-of-war."

Colonel Cooney further states that "I have knowledge of a death at Bikini caused by drinking wood alcohol. There were other deaths due to various types of accidents. At Eniwetok we had a death due to drowning, one due to a truck accident, and one due to a fracture of the skull encountered

in a fight. A sailor sustained a fracture of the cervical spine with severance of the cord by diving into shallow water. He will be paralyzed, sterile, and impotent as long as he lives. None of the above tragic deaths received national news publicity. However had we had a single death due to radiation, would it have been publicized? It would have received front page publicity throughout the country."

During August, 1946, Colonel Cooney interviewed and examined a large number of Japanese who had recovered from radiation sickness. He described them by saying "they appeared perfectly normal and were handicapped in no way toward pursuing their way of living. Such is not the case with thousands of our soldiers who participated in 'conventional' warfare in World War II. They are handicapped by loss of limbs and eyes. Neither is it true of many of the Japanese who received no radiation injury but received severe burns and traumatic injury as a result of the bombing. It has been estimated that from 5 to 15 per cent of the deaths at Hiroshima and Nagasaki were due to radiation. Why do we concentrate on the 15 per cent and forget the 85 per cent?"

Referring to the development of the atomic bomb, Colonel Cooney states "the atomic bomb was developed as a blast weapon of war and strategically so used. The radiation effect was never considered to be the prime component of its effectiveness. The destruction attendant to the blast, heat, and secondary fires was paramount. In Japan there was no significant 'poisoning' of the ground by fission products or induced activity from neutron capture, and yet many believe that the bomb is primarily a weapon which destroys by mysterious radioactivity."

Having appeared before local defense agencies in many cities, Colonel Cooney finds that "they are preparing for defense against an atomic bomb attack - universally they are thinking only of radiation. Invariably they ask, 'Where will we get Geiger counters?' Geiger counters are not their only problem - fire-fighting equipment is many times more important, as are well organized rescue squads. 'But we have been told that we will not be able to go into a bombed city and rescue the injured.' Hiroshima and Nagasaki disproves this. The residual radiation from an air burst bomb is insignificant. The significant prompt radiation occurs in a matter of microseconds and does not extend beyond a 2,000 yard distance. Immediately after such a detonation, such as Hiroshima or Nagasaki, it is perfectly safe to enter into a bombed area and rescue the thousands whose injuries will be such that they will not be able to walk. Unless evacuation of these injured is effected, thousands will be burned to death by secondary fires. Such was the case at Hiroshima and Nagasaki. But how about an underwater or ground burst? In such cases certainly the residual radiation hazards would be increased many fold, but the blast and fire hazards and the prompt radiation hazard would be proportionately decreased, and in my opinion, the total number of casualties would be less.

"Much has been written about 'poisoned' water. In case the water supply of a city is contaminated by fission products or unfissioned material from an air burst of an atomic bomb, all the evidence on hand at present indicates that after passing through a modern filtration plant the water at the tap would be safe to drink. More work will be done to prove or disprove this statement. We do know from our experience at Bikini that the water from evaporators used on the ship is safe for drinking. Again we must not forget that frequent cases of typhoid fever still occur from drinking polluted water.

"If we are to live with this piece of ordnance and ever have to use it again in the defense of our way of living, we must acquire a practical attitude, not only toward its efficiency or limitations as a bomb, but also toward the possible effects and limitations of this 'mysterious' radiation.

"We must recognize that the casualties caused by the blast and burns from this weapon will be many times greater than the deaths caused by radiation. We must also dispel the erroneous idea that the rescue work of the injured will be impossible due to residual radiation."

Colonel Cooney stresses that "it is of the utmost importance that we recognize that the radiation hazards are ADDITIONAL hazards. They only add to the complexity and perhaps even the severity of the other hazards of total warfare. Therefore, we must not and cannot concentrate on this phase of atomic warfare to the detriment of other defensive preparations. Rather, we must know and understand the facts about ionizing radiations if we are to survive the other dangers."

XVI. Curare - Curarine - Intocostrin - d. Tubocurarine - Capt. Mary A. Younger, ANC,
172nd Station Hospital, APO 547



The potential value of curare in medicine was discovered by Richard Gill, explorer, naturalist and author. During one of his early expeditions in the Eucadorian jungles, as described in his book "White Water and Black Magic," he was thrown from a horse and suffered an injury that resulted in a spastic paraplegia. Temporarily incapacitated with the annoyances of the paraplegia, Gill chanced one day, in a discussion, to think about the possibilities of utilizing curare to relieve the spasticity. Upon further deliberation, he became enthused with the prospects of the satisfactory clinical application of the South American Indian arrow poison. Despite limiting physical infirmities, Gill organized another expedition into South America for the purpose of determining the source of curare and the methods of its extraction. After many months

in the jungle during which time he gained the confidence of the Indians, Gill learned the various plants from which the curare was extracted. He learned also the secret methods by which the Indians brewed the crude mass with which they tipped their poison arrows. Gill brought back with him several botanical specimens which have since been deposited in the New York Garden and in the Arnold Arboretum at Harvard. He was confronted with considerable skepticism among manufacturing chemists as to the practicability of curare in clinical medicine, but, with a singleness of purpose that has characterized his whole experience with curare, he finally succeeded in interesting Dr. McIntyre, pharmacologist at the University of Nebraska, in developing the product. After initial experimentation in the laboratory by McIntyre and in the clinic by Bennett, the psychiatrist, the drug was turned over in 1939 to the E. R. Squibb laboratories for commercial preparation.

Intocostrin, the biologically standardized form of curare, prepared by E. R. Squibb and Company from the plant Chondodendron Tomentosum is one of the various trade names used for curare. The others, as mentioned in the title of this paper, trade marks of different companies, have a slight variation in their action, but all having curare-like effects, are defined as follows:

Curare: term used for an agent obtained as a crude extract from whatever source.

Curarine: denotes a relatively pure alkaloid from Strychnos toxifera.

d. Tubocurarine Chloride: refers to the crystalline, chemically pure, active material from the plant Chondodendron Tomentosum.

Intocostrin, a relaxant or muscle paralyzer, but not a pain relieving agent, is not a new anesthetic agent itself, but an adjunct to general anesthesia. It is made from purified Chondodendron Tomentosum (plant) extract in aqueous, sterile solution, supplied in 5 cc and 10 cc rubber capped vials. It is standardized by the rabbit "Head-Drop Crossover" test so that 1 cc is equivalent to 20 units - for intravenous and intramuscular administration. Intocostrin may be given with any type of anesthetic for any type of surgery, and is considered one of the greatest boons to successful anesthesia. Particularly useful in abdominal surgery, it produces contracted intestines and complete relaxation of the abdominal muscles, which is so important in these cases and so fully appreciated by the surgeon and so very heartening to the anesthetist.

The curare effect is the interruption of nerve impulses at the myoneural junction, so that the muscle will respond neither to injected acetylcholine nor to stimulation of its nerve. The action is entirely peripheral, so that a nerve bathed in curare will still conduct impulses.

Muscles are affected in the following order: first, those supplied by cranial nerves, followed by those of the trunk and extremities, and finally those of respiration; the diaphragm is the last muscle to be paralyzed. Subjectively, the effects of curare on an unanesthetized, unpremedicated patient are, in the order of appearance, weakness of the eyelids, strabismus with diplopia, weakness of throat and jaw muscles with inability to swallow or to cough, inability of the patient to raise himself, weakness of arms and legs, and finally respiratory paralysis. Recovery occurs, as in a too high spinal block, in the reverse order, so that the diaphragm and the intercostal muscles are the first to regain their functions. Under anesthesia, the only effect seen with a proper dose is the immediate relaxation of the abdominal muscles, with a large dose, respiratory depression.

INDICATIONS IN GIVING INTOCOSTRIN:

1. To soften convulsions in shock treatment of mental disease.
2. To secure muscular relaxation in surgery.
3. For relief of spastic and athetoid states.
4. For its relaxing effect in carrying out certain manipulative procedures.
5. As a diagnostic agent in Myasthenia gravis. (Myasthenia gravis is a syndrome of fatigue and exhaustion of the muscular system marked by progressive paralysis of muscles without sensory disturbance or atrophy. It may affect any muscle of the body, but especially those of the face, lips, tongue, throat and neck.)

CONTRAINDICATIONS FOR THE USE OF INTOCOSTRIN:

1. Myasthenia gravis.
2. Over-dosage which results in temporary respiratory paralysis.
3. The inability of the anesthetist to perform artificial respiration. The anesthetist must be certain, before administering curare, of his ability to care for the respiratory depression that may ensue by performing artificial respiration. The physiologic antidote for a toxic dose of curare is prostigmine 1 cc of a 1:2000 solution of the latter being injected intravenously. Controlled breathing of the patient is a necessary part of the anesthetist's armamentarium. If indicated, artificial respiration is best carried out in these cases where it is demanded, such as intermittent manual compression of the breathing bag on a gas machine, using either a tight face mask or an endotracheal tube.

ELIMINATION OF INTOCOSTRIN:

Intocosttrin is partly destroyed by the liver and in part eliminated unaltered by the kidneys.

PHYSIOLOGIC ANTIDOTE:

Prostigmine 1:2000 solution- - -1 cc IV with the ability of performing artificial respiration and using oxygen under pressure. An adequate airway.

DOSAGE AND ADMINISTRATION:

1. In softening convulsions of shock therapy: $1/2$ unit per pound of body weight, administered intravenously as a sustained 1 to 1- $1/2$ minute injection. Initial dose 20 units less than this.
2. In anesthesia: for muscular relaxation 20 to 60 units intravenously.
3. In spastic and athetoid states in children: $1/2$ to 1- $1/2$ units per pound of body weight, administered intramuscularly at four-day intervals.
4. In manipulative procedures: Fractures and Dislocations - as in shock therapy or somewhat less.
5. In Myasthenia gravis: $1/15$ to $1/5$ of average adult shock therapy dose, IV.
6. In Tetanus: IV intermittently - 1 level above respiratory level.

TECHNIQUE OF ADMINISTRATION OF INTOCOSTRIN WITH NITROUS OXIDE---OXYGEN MIXTURE:

Patient receives the usual premedication with morphine and atropine. When the surgeon is ready to prepare the operative field, the initial dose of sodium pentothal is injected intravenously in an amount sufficient to produce narcosis to a level to produce analgesia. The inhalation of 2 liters of nitrous oxide and 2 liters of oxygen by the semi-closed carbon dioxide absorption technic is then started and is continued throughout the operation.

During the preparation of the operative field, small repeated doses of sodium pentothal

are given so that by the time the skin incision is made, the patient has reached the stage of surgical anesthesia. If necessary, a pharyngeal airway is inserted to establish an unobstructed airway. The total time from the start of anesthesia to the skin incision averages about three minutes.

When an incision is made, an initial dose of 20 to 40 units of Intocostrin should be given intravenously from a small syringe. This amount is usually sufficient to produce good relaxation in the average adult of good physical condition. Small initial doses are preferred for certain types of patients, for example, the aged, children. In some cases it is necessary to add additional 20 units when the peritoneum is opened. If the intraperitoneal portion of the operation is completed in twenty to thirty minutes, supplementary injections of Intocostrin are not usually indicated.

The character of respiration must be watched carefully for any change in rate, amplitude and for evidence of obstruction symptoms of an overdose of Intocostrin which is manifested by a decrease in the amplitude of the inspiratory and expiratory phases of breathing. The inspiratory phase of respiration becomes shorter and gasping in nature, developing with intercostal paralysis in the later states. Complete respiratory paralysis may ensue with overdosage of Intocostrin. Artificial respiration is accomplished by gentle manual compression of the breathing bag until spontaneous respiration is resumed.

THE USE OF INTOCOSTRIN IN METRAZOL SHOCK THERAPY AND ELECTRICAL SHOCK THERAPY:

Technique: When using Intocostrin to soften convulsions in metrazol shock therapy or electrical shock therapy, a dosage of 1/2 unit of Intocostrin per pound of body weight is an average dose. Nevertheless, as a precaution, a dose of 20 units less than this should be employed initially for adults. Intocostrin should be administered intravenously over a period of 1 to 1-1/2 minutes. Avoid rapid injection.

After the Intocostrin injection has been administered, the anesthetist should wait at least two minutes, until the patient can hardly raise his head, before giving the shock. If metrazol is used, tongue gag and hyperextension are not necessary; the hands are folded over the chest and the knees guarded against sharp flexion. As a precaution during electro-shock therapy, a soft folded dental roll or mouth gag is placed between the teeth just before the current is applied.

The recommended dosage is sufficient for patients with weak musculature. If the estimated dose fails to produce sufficient myoneural block, a time lapse of 24 hours is recommended.

If, with the first Intocostrin injection, the convulsion is mild and the patient shows a tendency to respiratory embarrassment, as evidenced by laryngeal stridor, the dose of Intocostrin at the next administration should be reduced by approximately 10%.

Within two minutes after injection of Intocostrin, the physiologic effect should begin. The patient complains of haziness of vision. The anesthetist will observe bilateral ptosis with slight mystagmoid movements, relaxation of the face and heaviness, with relaxation, of the jaws. Later, the patient complains of tightness of the throat and huskiness of the voice, generalized heaviness and weakness of the neck muscles with inability to raise the head, followed by partial relaxation or complete paresis of the spinal muscles, legs and arms. Shallow respiration develops from partial relaxation of the intercostal and diaphragm muscles. The Intocostrin effect slowly recedes and should disappear in from 15 to 20 minutes. By the time the patient regains consciousness from the shock therapy, the effect has disappeared. Due to its central stimulation, metrazol has an action which appears to be partly antidotal to that of Intocostrin.

If respiratory failure should occur, artificial respiration should be instituted. Since the excretion of the drug is rapid, patients under artificial respiration spontaneously regain breathing power within a short time. The possible necessity for intubation should, however, be borne in mind, and an airway kept available on the tray for use in the event of obstructed breathing.

OPERATIVE PROCEDURES AND EXAMINATIONS AND TREATMENTS FOR WHICH RELAXATION WAS OBTAINED BY THE

USE OF INTOCOSTRIN:

1. Plastic Surgery
2. Tonsillectomy
3. Cholecystectomy

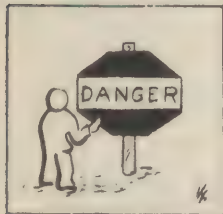
OUT OF
A JUNGLE BREW
CURARE

4. Gastrectomy
5. Appendectomy
6. Hysterectomy
7. Gastric and Intestinal Resection
8. Perineal Resection
9. Rammstedt Operation
10. Laparotomy
11. Nephrectomy
12. Colectomy
13. Colostomy
14. Hernioplasty
15. Abdominoperineal Resection
16. Adrenalectomy
17. Bile duct exploration
18. Enterostomy
19. Closed Reduction
20. Open Reduction
21. Spastic Disease
22. Tetanus
23. Shock Therapy
24. Vaginal Examination
25. Laryngospasm
26. Prostoscopy
27. Cystoscopy
28. Hiccups

REFERENCES

1. The Journal of The American Society of Anesthesiologists, September, 1947
2. Annual Convention of Anesthetists Institute, Berkley, Oakland and San Francisco, California, March 4 - 8, 1948

XVII. Trichlorethylene Degreaser Hazard



The following extract from a Department of the Army letter, (AGAO-S 729.3 (2 Aug 49) CSGPA-M, AGAO-C, subject: Trichlorethylene Degreaser Hazard, dated 19 August 1949), received in General Headquarters, Far East Command, is published for the guidance of all concerned.

"2. The following is a digest of an article from 'Safety Briefs,' published by New Jersey State Safety Council, Inc.

a. A worker received first and second degree burns of the skin by cold vapors from an automatic trichlorethylene degreaser while attempting to recover a basket of small parts which had fallen to the bottom of the tank. The day before the worker entered the tank, the steam was turned off and the trichlorethylene removed through a drainage pipe on side of tank.

b. When the worker entered the tank the following day, the tank was cool and it was assumed that all trichlorethylene had been drained off. Shortly after entering

the tank the worker became unconscious and the foreman also collapsed when he came to his aid. Other workers nearby finally removed both men.

c. The foreman regained consciousness quickly and sustained apparently only a blister on one hand. The worker had several convulsions and did not regain consciousness until after admission to the hospital. He complained of double and blurred vision and a burning sensation of the skin.

d. Diagnosis of worker's condition was first-and-second degree burns of the skin, first-degree chemical burns of both conjunctivae, and corneal abrasion of the right eye. The examination of the injured's burns and investigation of all factors involved led to the conclusion that cold trichlorethylene vapor was the causative agent. Treatment consisted of pontocaine and penicillin ointment to the eyes, vaseline and compress bandages to the entire body and penicillin intramuscularly. The patient was discharged on the eleventh hospital day, and, after a total of 31 days lost, returned to work."

"3. a. Before entering such tanks a check should be made to insure that the liquid has been entirely drained and if flames of any kind are to be used in the tank, then it should be ventilated with forced draught, to free it of residual vapor before use of flame. If it is necessary for a workman to be exposed to concentrations of trichlorethylene vapors, as in the case of entering a degreasing tank, the customary precautionary air-line respirator is not sufficient. With safety line attached to the waist and a fellow-worker standing by in case of an emergency, it is essential that the workman wear impervious protective clothing and goggles.

"4. The inherent hazards of trichlorethylene as well as other degreasing agents as set forth herein should be brought to the attention of the commander of each installation where such operations are performed. It should be recognized that all of the solvents such as carbon tetrachloride, trichlorethylene and perchlorethylene commonly used by military personnel in many industrial operations such as degreasing spray painting, dry cleaning, paint removing, rust proofing and impregnating have a significant degree of toxicity when improperly used. Acute intoxication such as occurred in the case described is occasionally observed. Chronic intoxication due to prolonged exposure is more apt to occur because it is insidious in onset and does not invite the attention that sudden asphyxiation does.

"5. Responsible medical officer should familiarize himself with industrial operations on his post or installation and acquaint himself with the type of solvents in use and the nature of their toxic action. Many solvents are mixtures, and many are sold under trade names which do not indicate their composition. Information on the composition of these mixtures may be obtained by referring the inquiry to the Office of The Surgeon General, and stating the manufacturer's name and address."

XVIII. Army Medical Department Internships



Each year the U. S. Army Medical Department offers internships to approximately 300 selected graduates of medical schools approved by the American Medical Association. This year, approximately 6,000 junior medical students have been apprised of the internship opportunities in the Army Medical Department and have been invited by Maj. Gen. R. W. Bliss, the Army Surgeon General, to visit Army General Hospitals in anticipation of applying for an internship for training beginning 1 July 1950. The selected candidates are commissioned in the Medical Corps Reserve, called to active duty, and assigned to Army General Hospitals for a 1-year rotating internship commencing each 1 July. Every consideration is given each candidate's preference of hospitals for assignment.

The 10 hospitals which will participate in the program of training interns have been approved by the Council on Medical Education and Hospitals of the American Medical Association and the Association of American Medical Colleges and are: Gorgas Hospital; Ancon, Canal Zone; Tripler General Hospital, Cahu, T. H.; Percy Jones General Hospital, Battle Creek, Michigan; Brooke General Hospital, San Antonio, Texas; Fitzsimons General Hospital, Denver, Colorado; Oliver General Hospital, Augusta, Ga.; Letterman General Hospital, San Francisco, Calif.; Madigan General Hospital, Tacoma, Wash.; Walter Reed General Hospital, Washington, D.C., and Valley Forge General Hospital, Phoenixville, Pa.

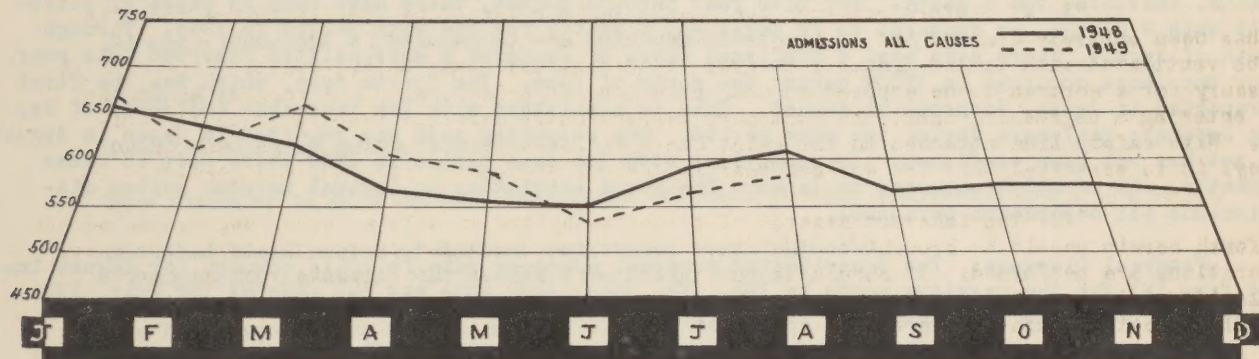
Among the various fields of medicine in which the new intern in the Army will receive

training are: Surgical Service including Urology and Orthopedics; Medical Service including Pediatrics and Contagious Disease; Neuropsychiatric Service; Obstetrical and Gynecological Service; Ophthalmology and Otolaryngology, and Laboratory Service.

PART III

STATISTICAL

HEALTH OF THE COMMAND



Admission rates per 1000 troops per annum for the four-week period ending 26 August 1949 were as follows:

	FEC	JAPAN	MARBO	PHILCOM	RYCOM
All Causes	577	610	257	487	638
Disease	528	556	210	447	605
Injury	50	53	48	39	33
Psychiatric	12	13	14	17	1.2
Common Respiratory Diseases and Flu	40	48	10	66	13
Primary Atypical Pneumonia	4.0	5.3	0	0	.61
Common Diarrhea	2.7	2.8	.93	1.9	4.3
Bacillary Dysentery	.49	.22	0	5.6	.61
Amebic Dysentery	.24	.11	0	3.8	0
Malaria, new	4.5	4.8	.93	1.9	5.5
Infectious Hepatitis	6.0	3.4	1.9	3.8	24
Mycotic Dermatoses	5.9	8.0	0	0	0
Rheumatic Fever	.57	.66	0	1.9	0
Venereal Diseases	185	178	27	152	342

The general health of the Far East Command for the month of August continues excellent. There was a slight increase in the rate for "all causes" over the rate of 569 cases per 1000 personnel per year for the previous month, to 577 this month. The increase for the month of August is chiefly attributable to the minor increased incidences of infectious hepatitis in RYCOM and Japan and venereal diseases among Air Force personnel.

The non-effective rate for August decreased from 21 per 1000 per day for July to 17. This is an unusual and unprecedented low non-effective rate. This low rate is affected favorably by the procedure of treating practically all venereal diseases on out-patient status. However, the seasonal contribution should not be overlooked. The rate for August 1948 was the same as July of this year, 21.

Diseases: The Far East Command admission rate for "all diseases" increased from 515 in July to 528 in August. This rate is lower than the rate for the same period last year which was 556.

Common Respiratory Diseases and Influenza: The Far East Command rate for common respiratory diseases and influenza remained essentially the same as last month, being 40 this month and 41 for July. However, it is to be expected that there will be increases in respiratory diseases as the winter season approaches.

Malaria: Malaria continues to decrease throughout the command, dropping from a rate of 13 in July to 10 this month. PHILCOM has continued to decrease from a rate of 19 in July of 1948 to 0 in July 1949. There was 1 case in August making a rate of 1.9 as compared to 13 for August of 1948. RYCOM showed an increased rate from 2 for July to 5.5 for August; however, this remains very favorable when compared to the same periods a year ago, which had rates of 44 and 52 respectively.

Infectious Diseases of the Central Nervous System: 26 cases of poliomyelitis with 1 death was reported for the month of August as compared to 19 cases and 1 death for the previous month. Eighteen of the cases and the 1 death occurred in Japan. The other 7 cases were in RYCOM. In August of 1948, 27 cases and 1 death were reported, 22 of which were in Japan, 1 in Korea, 2 in RYCOM and 2 in PHILCOM, including the 1 death. For this year through August, there have been 58 cases of poliomyelitis with 2 deaths, as compared to 79 cases and 6 deaths for the same period in 1948. Through the month of August, there have been 4 confirmed cases of Japanese B encephalitis reported this year. Three of the cases occurred in RYCOM during the month of June. The fourth case, which was the first to be reported in Japan, occurred in August. This is coexistent with the increased incidence of Jap B among Japanese nationals during the same period. One suspected case was reported in Japan in August but as yet has not been confirmed. In comparison with the same period in 1948 there were 28 cases and 5 deaths, all of which occurred in Japan. The above statistics on central nervous system diseases include all occupation personnel.

Venereal Diseases: The consolidated venereal diseases rate for this command for August increased from 181 for the previous month to 185. The total Army rate was the same as for July, 182. The total Air Force rate increased from 178 to 197.

Evacuation:



Tabulated below are the number of patients evacuated from the major commands to the ZI during the four report weeks in August and the number of patients awaiting evacuation as of 26 August 1949:

	BY AIR	BY WATER	TOTAL	PNTS AWAIT EVACUATION
JAPAN	49	213	262	152
MARBO	22	4	26	4
PHILCOM	16	2	18	7
RYCOM	40	59	99	36
	127	278	405	199

Evacuations of military personnel per thousand strength for the period of 30 July to 26 August were as follows:

JAPAN	2.1	PHILCOM	1.9
MARBO	1.5	RYCOM	4.4
FEC	2.3		

Hospitalization:

The bed status as of 26 August 1949 was as follows:

	Total T/O Beds Auth.	Total T/O Beds Establ.	Total T/O Beds Occupd.	% Auth. T/O Beds Occupd.	% of Establ. Beds Occupd.
JAPAN	4,650	4,330	1,671	36	39
MARBO	775	450	75	10	17
PHILCOM	1,250	1,250	826	66	66
RYCOM	750	443	292	39	66
FEC	7,425	6,473	2,864	39	44

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The Chief Surgeon extends an invitation to all personnel of the Medical Department to prepare and forward, with view to publication, articles of professional or administrative nature. It is assumed that editorial privilege is granted. Copy should be forwarded so as to reach the Medical Section, GHQ, FEC, not later than the 10th of the month preceding the issue in which publishing is desired.

Capt. Vincent I. Hack, Editor